PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or	agent's file reference	e			
03/014 PCT			FOR FURTHER A		See Form PCT/IPEA/416
International application No.			International filing da	te (day/month/year)	Priority date (day/month/year)
PCT/CH2004/000212			03.04.200	4	04.04.2003
International Patent Classification (IPC) or national classification and IPC					
Applicant					
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			ninary examination rep e applicant according t		nternational Preliminary Examining Authority
2. This	REPORT consists of	of a total of	7	sheets, including	this cover sheet.
3. This	report is also accom	panied by Al	NNEXES, comprising:		
a. [(sent to the a	pplicant and	to the International Bu	reau) a total of 2	sheets, as follows:
					mended and are the basis for this report and/or
	sheets of Instruct	-	ctifications authorized	by this Authority (see Rul	e 70.16 and Section 607 of the Administrative
					iders contain an amendment that goes beyond in item 4 of Box No. I and the Supplemental
	Box.			,	
ъ. [(sent to the I	nternational	Bureau only) a total of	(indicate type and number	of electronic carrier(s))
					, containing a sequence listing and/or tables
			readable form only, a rative Instructions).	s indicated in the Suppler	mental Box Relating to Sequence Listing (see
4. This			ng to the following iter	ns:	
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	Box No. I	Basis of the	report		
	Box No. II	Priority			
l ∐	Box No. III	Non-establi	shment of opinion with	regard to novelty, inventi	ve step and industrial applicability
	Box No. IV	Lack of unit	y of invention		
	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
	Box No. VI	Certain doc	uments cited		
	Box No. VII	Certain defe	ects in the international	application	
	Box No. VIII	Certain obs	ervations on the interna	ational application	
Date of submission of the demand Date of completion of this report				s report	
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Name and mailing address of the IPEA/EP				Authorized officer	
Facsimile No.				Telephone No.	

Translation

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International application No.
PCT/CH2004/000212

Box	No. I	Basis of the report					
1.		regard to the language, this report is based on the internation ated under this item.	nal application in the language in	which it was filed, unless otherwise			
		This report is based on translations from the original language which is the language of a translation furnished for the purport.		,			
		international search (Rule 12.3 and 23.1(b))					
		publication of the international application (Rule 12.4)	publication of the international application (Rule 12.4)				
		international preliminary examination (Rule 55.2 and/	or 55.3)				
2.	recei	regard to the elements of the international application, this is iving Office in response to an invitation under Article 14 are report):					
		the international application as originally filed/furnished					
	\boxtimes	the description:					
		pages 1-7		as originally filed/furnished			
		pages*					
		pages*	received by this Authority on				
	\boxtimes	the claims:					
		nos. 12-17		as originally filed/furnished			
		nos.*	as amended (togethe	r with any statement) under Article 19			
		nos.* 1-11		30.11.2004 with letter			
		nos.*					
	\boxtimes	the drawings:					
		sheets 1/3-3/3		as originally filed/furnished			
		sheets*	received by this Authority on				
		sheets*					
	\Box	a sequence listing and/or any related table(s) – see Supplem		inting			
			ental box Relating to Sequence L	isting.			
3.	ш	The amendments have resulted in the cancellation of:					
		the description, pages	· · · · · · · · · · · · · · · · · · ·				
		the claims, nos.					
			 				
		the sequence listing (specify):					
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4.	Ш	This report has been established as if (some of) the amend they have been considered to go beyond the disclosure as fi					
		the description, pages	· · · · · · · · · · · · · · · · · · ·				
		the claims, nos.					
		the drawings, sheets/figs					
		the sequence listing (specify):					
		any table(s) related to sequence listing (specify):					
Ŀ	If ite	em 4 applies, some or all of those sheets may be marked "sup	erseded."				

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Box		Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement			
	Novelty (N)	Claims	1-4	YES
		Claims	5-11	NO
	Inventive step (IS)	Claims	1-4	YES
		Claims	5-11	NO
	Industrial applicability (IA)	Claims	1-11	YES
		Claims		NO
l				

- 2. Citations and explanations (Rule 70.7)
 - 1 WO-9730654 was not cited in the international search report. A copy of the document is attached.
 - 2 INDEPENDENT CLAIM 1

The present application meets the requirements of PCT Article 33(1), because the subject matter of claim 1 is novel within the meaning of PCT Article 33(2).

Prior art

WO9730654 (D3) discloses a method for producing a cylindrical blank made of a ceramic material for dental prostheses, the material being isostatically pressed onto a pin (page 12, lines 9-13).

Differences

The subject matter of claim 1 differs from the method known from D3 in that a pressed piece is formed from which a multitude of discoid blanks (3) of various thicknesses are cut at a right angle to the axis of said pressed piece.

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reasoning

The zirconium oxide material in D3 is pressed onto a pin, thereby producing a tube shape, the exterior of which is machined. The prior art contains nothing that suggests cutting a hollow shape of this type into a multitude of discoid blanks. This is neither known from nor rendered obvious by the cited documents. Therefore, claim 1 involves an inventive step (PCT Article 33(3)).

2 DEPENDENT CLAIMS 2-4

Claims 2-4 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

- 3 INDEPENDENT CLAIM 5 AND DEPENDENT CLAIMS 6-8
- 3.1 The present application does not meet the requirements of PCT Article 33(1), because the subject matter of claim 5 does not involve an inventive step within the meaning of PCT Article 33(3).
- 3.2 Machining a blank to form dental prostheses when it has not been subjected to final sintering is known; see, for example, D1 (page 1, lines 13-24). Therefore, the subject matter of claim 5 is not inventive.
- 3.3 A person skilled in the art is familiar with

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

selecting the temperature and duration of the final sintering process such that a final product with optimal characteristics is achieved. Furthermore, D3 discloses the selection of a final sintering temperature of 1500°C for zirconium oxide (see claim 14). Therefore, the subject matter of claims 6-8 is not inventive.

4 INDEPENDENT CLAIM 9

The present application does not meet the requirements of PCT Article 33(1), because the subject matter of claim 9 lacks an inventive step within the meaning of PCT Article 33(3).

4.1 D2 is regarded as the closest prior art. It discloses (the reference signs in parentheses refer to D2):

a machining station <u>suitable</u> for producing dental prostheses (32), the machining station being designed based on a guided metal cutting system (see column 3, line 22), the machining station being equipped with a mounting device (20) and at least one milling cutter, and the mounting tool having means for frictionally mounting a blank (40), and the parallel or quasi-parallel surfaces of the blank to be machined being machinable by passing them through the milling cutter at a right angle or virtually at a right angle, from which the subject matter of independent

33(3)).

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

claim 9 differs in that the mounting device in D2 is not **pivotally** arranged. This feature is regarded as a minor structural detail.

Therefore, the subject matter of claim 9 is not regarded as inventive (PCT Article

- 4.2 In order to be able to machine occlusal and cavital forms of the dental prosthesis, the angle between the surface of the blank to be machined and the milling cutter should be modifiable. This can be achieved by rotatably mounting the blank or by positioning the cutter in a modifiable manner. It is obvious that in the machining of the blank in D1 and D2, the cutter can assume a modifiable position. A rotatable mounting device is an alternative solution with the same effect. Therefore, the subject matter of claim 10 is not inventive.
- 4.3 D1 discloses a blank having a frame (12) mounted in a holder (24) on its peripheral edge. With respect to the feature of frictional mounting, D1 describes the same advantages as those resulting from the concentric turned groove in the present application. Therefore, a person skilled in the art would regard the inclusion of a concentric groove in the blank (10) as an alternative design measure for solving the

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	problem of interest. Therefore, the subject
	matter of claim 11 is not inventive.